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**Wiki Assignment #5**

Cicconi, M. (2014). Vygotsky meets technology: A reinvention of collaboration in the early childhood mathematics classroom. *Early Childhood Education Journal*, *42*(1), 57-65. doi:10.1007/s10643-013-0582-9

In this article it discusses how Vygotsky’s traditional role of the more knowledgeable other (MKO) has been transformed due to the advancements in technology. With the advancement of Web 2.0 (an improved version of the internet) it enables students to become fully immersed in this new culture of technology because they are able to have more of an interactive experience. They are able to use interactive geographic maps, have live communications with students on the other side of the world, and create and upload videos. This article also discusses three interactive tools: Voki, VoiceThread, and Vodcasts and these three tools help to empower students in an early childhood classroom when it comes to math.

Gu, X., Zhu, Y. & Guo, X (2013). Meeting the “digital natives”: understanding the acceptance of technology in classrooms. *Educational Technology & Society*, *16* (1), 392–402.

Over the past few decades, technology has been rapidly developing and there are continuing efforts to integrate technology in the classrooms. This article focused on the assessing the integration of technology into the classroom. They aimed to understand the differences between the students and teachers and their acceptance of technology into the classroom. The participants in this study were chosen by random and a research model was used to collect data. The results from this study show that there is a difference between teachers and students with their views on technology. The results indicated that there is a difference with regards to how technology is utilized in the classroom and how the importance of technology is perceived. Based on these results it gives educators a better understanding of how the new millennium learners learn and how the administrators can provide these learners with a proper classroom that has appropriate technology products to support their needs.

Means, B., Olson, K., & Singh, R. (1995). Beyond the classroom: restructuring schools with technology. *The Phi Delta Kappan,* *77*(1), 69-72.

In this article the author discusses the benefits of having technology in the classroom. According to Means she says “technology can provide students with supports for storing and manipulating information” (pg 69). In the article the author discusses that for teacher to feel more comfortable with technology is to give the teachers their own personal computers. This will give teachers the opportunity to learn how to use a computer and give them a better understanding on how to integrate technology in their classroom. Students can benefit from using technology by having schools create a computer room where they can go and have access to computers. By giving students this type of access they can learn how to navigate different software programs, and the internet. Technology is an important part of the school life and should be integrate into classrooms to make learning better.

Schmid, E. C. (2008). Potential pedagogical benefits and drawbacks of multimedia use in the English language classroom equipped with interactive whiteboard technology. *Computers & Education*, *51*(4), 1553-1568.

This article discusses and analyzes the integration of an interactive whiteboard in and English language classroom. This study was conducted over eight weeks and there were twenty-nine students who participated. For this study they used the interactive whiteboard to help enhance the lesson being taught. The results from this study showed that the interactive whiteboard helped with teaching different types of learners. This study focused on how technology makes lessons go more smoothly and help keeps things on track. For example, the use of hyperlinks made transitions easily between topics. This research shows the benefits of having an interactive white board in class, and how it can enhance lessons being taught to older students.

Carlin, A., Guthrie, R. (2004). Waking the dead: using interactive technology to engage passive listeners in the classroom. *Proceeding of the Tenth Americas Conference on Information System,* 2952-2959

This article discusses a school who studied and learned students perceptions about the value of the Audience Response System. This type of technology consists of an eight-button response pad and it transmits student responses to a receiver that is connected to the computer in the classroom. The students who used this type of technology were in college and they were skilled with computers. Based on the results the students thought the response pad was good to have in the classroom, and they had a positive experience. The teachers also had a positive experience using the response pad, and they liked that it engaged students and it was a way for all of them to participate.

Cordes,C., Miller,E. (2000). Fool’s gold: a critical look at computers in childhood. *Alliance for childhood,* 4-103

In this report it examines the potential harms of having technology in the classroom for early childhood and elementary classrooms. This report talks about the attempts to push in technology in the classroom and the effects it has on learning things traditionally. The report then explains the harmful effects of using the computers and how it can effect them physically. The authors then go on to explain that schools and families should provide children with a healthy childhood and not one where technology is taking over their lives. This report goes on the explain the harmful effects technology can have on students.

Gardner, H. (2000). Technology remakes the schools. *Futurist*, *34*(2), 30-32.

In today’s society all educators need to adapt to the technologically advanced world in which many schools operate. Many schools today have computers and networking capabilities, but the future of education will be organized primarily around the computer. Computer technology puts all of the world’s information right at a person’s fingertips. Computers permits a degree of individualization such as personalized coaching and tutoring. Computer software programs can be geared toward helping a student based on their individual needs. New and creative approaches to teaching must be developed to prepare students for changing roles they will have to assume in the future.

Selwyn, N., & Facer, K. (2014). The sociology of education and digital technology: past, present and future. *Oxford Review of Education*, *40*(4), 482-496.

Classrooms and other formal learning environments are filled with computers, digital softwares and there is a growing amount of educational word is being conducted on a “virtual” basis. One of the most significant digital issues that captured that attention of sociologist is the temporal and spatial expansion of educational processes and practices through technological means. Sociologists have come to the conclusion that digital technologies are seen to be enabling educational engagement regardless of the place, setting, and space.

Inan, F. A., & Lowther, D. L. (2010). Factors affecting technology integration in K-12 classrooms: a path model. *Educational Technology Research & Development*, *58*(2).

The purpose of this study was to examine the direct and indirect effects of teachers’ individual characteristics and perceptions of environmental factors that can influence the way they integrate technology in the classrooms. In an effort to improve student learning almost every school has internet access and computer to help students in their learning. Unfortunately, increased availability of technology in the schools does not exactly lead to improvement in classroom practices. Technology can be grouped primarily into three broad categories; technology for instructional preparations, technology as a learning tool, and technology for instructional delivery. A research based path model was developed to explain the relationships between these factors and was tested on 1,382 Tennessee public school teachers. Based on the results form this study teachers’ readiness had the highest effect on technology integration. This is a very important factor in the model because it can carry the most indirect effects on technology integration. Overall support and computer proficiency had the second and third effect on technology integration.

Carver, L. B. (2016). Teacher perception of barriers and benefits in K-12 technology usage. *Turkish Online Journal Of Educational Technology - TOJET*, *15*(1), 110-116.

This study explores K-12 teacher’s perceptions of the benefits and barriers of technology integration in the classrooms. The sample was composed of 68 students who were enrolled in online classes. An anonymous online survey was conducted for data. The results indicated that the first barrier that teachers and students come to is the availability of technology. Equipment availability has the biggest impact on weather technology can be incorporated in the classroom. Also according to the results, teachers said that a reason that they chose to use technology in their classroom was because they felt that it resulted in increased student engagement. Once teachers determined that technology was available to them that is when they considered how technology can help enhance their lesson.

Kozma, R. B. (2003). Technology and classroom practices: an international study. *Journal Of Research On Technology In Education*, *36*(1), 1-14.

This study examines the findings from 174 case studies of innovative technology practices. This study focused on how classrooms all over the world used technology to change the practices of the teachers and students. With many of the new technologies in the classrooms, it is used as a way to support students as they look for information. The researchers who participated in this case study decided to combine international criteria with the local concerns of the countries. Based on these selected cases, teachers are using ICT (information and communication technology) to help change the way they teach. Teachers are using IC tot provide students with structure and advice. When both teachers and students use technology they are more likely to develop new ICT problem solving, information management, and communication skills.

Wang, S., Hsu, H., Campbell, T., Coster, D., & Longhurst, M. (2014). An investigation of middle school science teachers and students use of technology inside and outside of classrooms: considering whether digital natives are more technology savvy than their teachers. *Educational Technology Research & Development*, *62*(6), 637-662.

The purpose of this study was to investigate the popular assumption that “digital natives” have surpassed the “digital immigrants” in terms of there technology experiences. To examine the intersection of these generations and their experiences with technology, they used a mix methods approach. They surveyed and compared 24 middle school science teachers and their 1.078 students. They conducted inside and outside experiences, and focus group interviews. Based on the study the results showed that many middle school students’ technology use outside of the schools surpassed the technology they used inside of school. Their findings also showed that the technology used inside of the school has not changed in comparison with past decades. The main problem that this study discovered was that students’ lacked the opportunities to practice technology beyond pursuing personal interests. The findings imply that there is a disconnect between students’ inside and outside school technology experiences and that is because of the lack of sufficient teacher training concerning technology.

Delgado, A. J., Wardlow, L., McKnight, K., & O’Malley, K. (2015). Educational Technology: A review of the integration, resources, and effectiveness of technology in K-12 classrooms. *Journal Of Information Technology Education*, *14*397-416.

This article discusses the critical review of the transitions that technology integration has made over the years. It also discusses the amount of resources and funding that has been given to the schools to immerse technology, and the results on effectiveness if using technology in education. There are a lot of instructional strategies that is being used to integrate technology into K-12 classrooms. There also have been large investments made to help integrate technology in the classrooms. With technology being used in the classrooms, there are promising results that are being shown that shows that technology can be effective in the classroom. According to their findings, they can see that technology can be very beneficial.

Ertmer, P. A., Addison, P., Lane, M., Ross, E., & Woods, D. (1999). Examining teachers' beliefs about the role of technology in the elementary classroom. *Journal Of Research On Computing In Education*, *32*(1), 54.

Integrating technology into a school curriculum can be hampered by both external and internal barriers. This study was designed to examine the relationship between the first and second order barriers of technology. First-order changes adjust the current practices to make it more effective. Second-order changes confront beliefs about current practice and lead to new goals. Barriers to change mean that there are extrinsic and intrinsic factors that affect a teacher’s innovation implementation. The researchers picked several teachers in one school of varying grades. According to this article, in order for teachers to embrace technology they need to believe that integrating technology If teachers do not believe in technology and the benefits it has, they are less likely to incorporate the technology in the classrooms.

Lai, C. (2015). Modeling teachers' influence on learners' self-directed use of technology for language learning outside the classroom. *Computers & Education*, *82*74-83.

This study aimed to model the influence of teacher behaviors on learners; using self- directed technology. There is a conceptual model of three types of teacher support (affection, capacity, and behavior) and these behaviors were reported to influence student’s self directed technology use. One hundred and sixty undergraduate foreign language learners were surveyed to test the conceptual model. Based on the results of this study affection support influenced self-directed technology use through strengthened usefulness. The study also called for greater research attention and efforts to understanding the nature of teachers’ influence on a learner.

Quillen, I. (2012). Can technology replace teachers? Quality debated as districts tap tech over teachers. *Education Digest: Essential Readings Condensed For Quick Review*, *78*(4), 4-10.

This article discusses a school board meeting that was held in Colorado and they wanted to replace teachers with a digital option to teach the languages of French and German. Many parents and teachers were against this idea because they felt that the digital method is not as meaningful and rich as having a teacher teach these lessons. This argument sent a sense of fear to the teachers because many of them are beginning to feel that they can be pushed out of their jobs, especially in areas where there is a tight budget. Nancy Bujnowski a teacher who lost her job stated “computerized programs like Rosetta Stone, which are market to the public at large in addition to educational institutions, also give the public a sense that computerized foreign language instruction is suitable to replace a flesh-and-blooded teacher” (pg. 10). These types of worries are beginning to grow more and more, even though young teachers and veteran teachers are appreciating the teaching potential of the internet and the benefit it has to student achievement.

Anderson, S. E., Groulx, J. G., & Maninger, R. M. (2011). Relationships among preservice teachers' technology-related abilities, beliefs, and intentions to use technology in their future classrooms. *Journal Of Educational Computing Research*, *45*(3), 321-338.

This study investigated the relationships among students’ technology-related abilities, beliefs, and intentions. There were 217 preservice teachers and they responded to a post-course survey. Value beliefs was the best predictor of the teacher’s intentions for the way they used a variety of software and how they felt about the future of technology. Researchers have also demonstrated that similar variables such as outcome expectations or perceived usefulness also predicated a preservice teachers’ intentions about the way they technology. Self- efficacy was also another important predicator when it came to the intentions of using different software. The results from this study indicated that teacher educators should consider ways to influence students’ value beliefs as well as their self-efficacy beliefs. It is important for teachers to consider this because it effects the way they integrate technology in the classroom. Teacher candidates need opportunities to practice effective technology instruction in technology courses.

Eyyam, R., & YaratAan, H. S. (2014). Impact on use of technology in mathematics lessons on student achievement and attitudes. *Social Behavior & Personality: An International Journal*, *42*31-42.

In this study researchers have investigated students’ attitudes towards the technology use in their class weather or not it improved their academic achievement. The subject of Mathematics was selected, and the lessons were designed using different technological tools. There were three experimental groups and 2 control groups and each group took a pre and post test. The results showed that students had a positive attitude toward the use of technology. The impact of the use of technology can be seen in the students’ results. Also, the results showed that many students preferred to be in a class where educational technology was used, but were unsure if it would help them become successful in the class. This study helped to shed light that educational technology can be very helpful.

An, Y., & Reigeluth, C. (2012). Creating technology-enhanced, learner-centered classrooms: K-12 teachers' beliefs, perceptions, barriers, and support needs. *Journal Of Digital Learning In Teacher Education*, *28*(2), 54-62.

This study explores the integration of technology in the learning centers at school. The researchers used an online survey in which one hundred and twenty-six students participated in. The results from this research provide insights into how to support teachers in creating a technology enhanced learning center. The learner-centered model focuses on developing real life skills, higher order thinking, and problem solving skills. Using this model better helps to meet the needs of the information age, this model also helps to increase student motivation and learning. Based on the results from this study there is an overlooked dynamic which is the relationships between technology, pedagogy, and content. As a result, many teachers are focused on the cool stuff, but are struggling to apply it for student learning. Schools should put more focus on learner-centered instruction and less on state test scores, beyond providing the technology tools and training.

Clark, K. D. (2000). Urban middle school teachers' use of instructional technology. *Journal Of Research On Computing In Education*, *33*(2), 178.

The purpose of this study was to investigate the teacher’s perspectives of their use of the instructional technology and if they understand this technology. There were twenty-eight teachers in a large urban middle school. This study investigated the effects and influence of technology on teacher’s duties and on their interactions with the students. Based on the results the teachers felt that technology is a very important when it comes to educating their students. They also indicated that there is a need for more technology in the classrooms. Based on the results many of the male teachers seemed more likely to feel proficient in using technology then their female coworkers. Most of the teachers expressed that they have a positive attitude towards using technology in their classrooms.

Cradler, J., McNabb, M., Freeman, M., & Burchett, R. (2002). How does technology influence student learning? *Learning & Leading With Technology*, *29*(8), 46-49,56.

This article discusses the evidence that 21st- century information, communication tools, and traditional computer assisted instructional applications can have a positive influence on student learning processes. The Center for Applied Research in Educational Technology (CARET) has gathered research and they have evaluated how technology influences student achievement and academic performance. According to their research, collaborative activities and formative feedback are the two key components of instructional strategies that accompany effective technology implementation. According to their research there is also a need for understanding that an effort is necessary for technology to have a positive effect on a students’ academic performance.

Bauer, J., & Kenton, J. (2005). Toward technology integration in the schools: why it isn't happening. *Journal Of Technology & Teacher Education*, *13*(4), 519-546.

This study conducted a study that examined the classroom practices of thirty tech-savvy teachers who used computer technology in their classrooms, how much they used it, and their general issues and concerns. The results from this study found that the teachers were educated and skilled with technology. The study also discovered that the teachers did not integrate technology on a consistent basis. The teacher’s two main concerns were that their students did not have enough time at the computers, and that they did not have enough time to do extra planning for their technology lesson. The study also showed that many schools have not achieved full true technology integration.

Downes, J. M., & Bishop, P. (2012). Educators engage digital natives and learn from their experiences with technology. *Middle School Journal*, *43*(5), 6-15.

According to this article, middle school students are more drawn to the twenty-first century technologies than any other group. This group is more drawn to technology because technology because they meet their needs. They spend most of their time on the social media sites. This study was conducted over a six-year period. They studied students in the middle grades and their engagement in a student centered technology rich classroom. Educators who participated in this study said that they had a hard time integrating technology into their teaching. They also felt that the outcome for integrating technology was important and worth it.

Giles, R. M., & Shaw, E. L. (2011). SMART boards rock. *Science And Children*, *49*(4), 36-37.

This article discusses the advantages of using the SMART Board. The SMART Board offers many uses, for example you can introduce a lesson or review material from a previous lesson. You are able to have a social interaction and communication with other students in another country. By using the SMART Board, teachers are able to make lessons more motivational and more meaningful. The SMART board can also gain the attention of the students, and they are more interested to learn the material. Students are able to come up to the board and actually move the pictures to the correct spot. Using the SMART Board can have a very positive effect on learning.

Hicks, S. D. (2011). Technology in today's classroom: Are you a tech-savvy teacher?. *Clearing House: A Journal Of Educational Strategies, Issues And Ideas*, *84*(5), 188-191.

Technology has changed the way the world functions on a daily basis. The education system has been affected by the increase of technology. With this change it has not been well accepted by some of the members of the educational community. With this change in technology, it has left some schools behind in the technology era. This article focuses on the negative and positive effects of having technology in the classrooms. One of the drawbacks of technology is that many teachers are resistant to the new and changing technology. Technology has increased rapidly, and teachers need to be supportive of the new technology.